MSc Climate Change: Science & Impacts
(1 Year Full Time)

On completion of the programme you should be able to critically understand climate change science and impacts, and creatively apply the knowledge in solving real-world problems. It suits students with a degree in Science, Engineering, Economics or other environment-related disciplines without previous knowledge in Meteorology or Climate but with a strong interest in climate change science and impacts. Students will have the choice to either conduct a research project working with leading experts from multidisciplinary backgrounds or work as a summer intern in various agencies or companies. In addition to data analysis and computational skills, students will have plenty of opportunities to develop their presentation and communication skills.

The UCD Earth Institute is Ireland’s largest research institute dedicated to earth and environmental sciences. The curriculum for this MSc is continually updated and the coursework is practically oriented and benefits from cutting-edge expertise and multidisciplinary research profiles.

Course Content and Structure

This campus-based full-time programme has been specifically designed for graduate students from various undergraduate disciplines without requiring previous climate change knowledge. The core modules will enable students to critically understand climate science and develop skills in climate data analysis and climate model simulations.

Core modules include:
- Weather and climate
- Climate model and scenarios theory
- Climate model and scenarios applications
- Case studies of climate change and impacts

Optional modules include:
- Numerical simulation and theory
- Practical Statistics
- Paleo-climate
- Environmental Impact Assessment
- Climate, Carbon, and Soil
- Energy System and Climate Change
- Energy Market and Climate Change
- Global Business
- Biofuel & Bioenergy resources
- Research Skills

This programme receives significant interest so please apply early online at www.ucd.ie/apply

Entry Requirements

- This programme is intended for applicants with a degree in Science, Engineering, Economics or other Environment-related disciplines. An upper second class honours or international equivalent is required.
- A strong interest in climate science and impacts is required.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent, such as TOEFL (iBT) score of 90 or PTE score of 63.

Career Opportunities

The multidisciplinary nature of this programme enables our graduates to work across different disciplines and meet the global market demands. With their strong skills in climate data analysis and broad knowledge of climate impacts, graduates could pursue various careers, such as in governmental departments or international organisations, NGOs, insurance, energy or consulting companies. The experience of engaging with cutting-edge research in the UCD Earth Institute places students in a strong position for further studies at PhD level as well.

Faculty Profile

Associate Professor Xuefeng Cui,
UCD Earth Institute, UCD School of Mathematics and Statistics

Trained as a climate modeller, Associate Professor Cui works on a large range of topics in climate change and impacts with a focus on land use change, food security and geoengineering. He has served as Lead Author for the IPCC AR5 and AR6 and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).